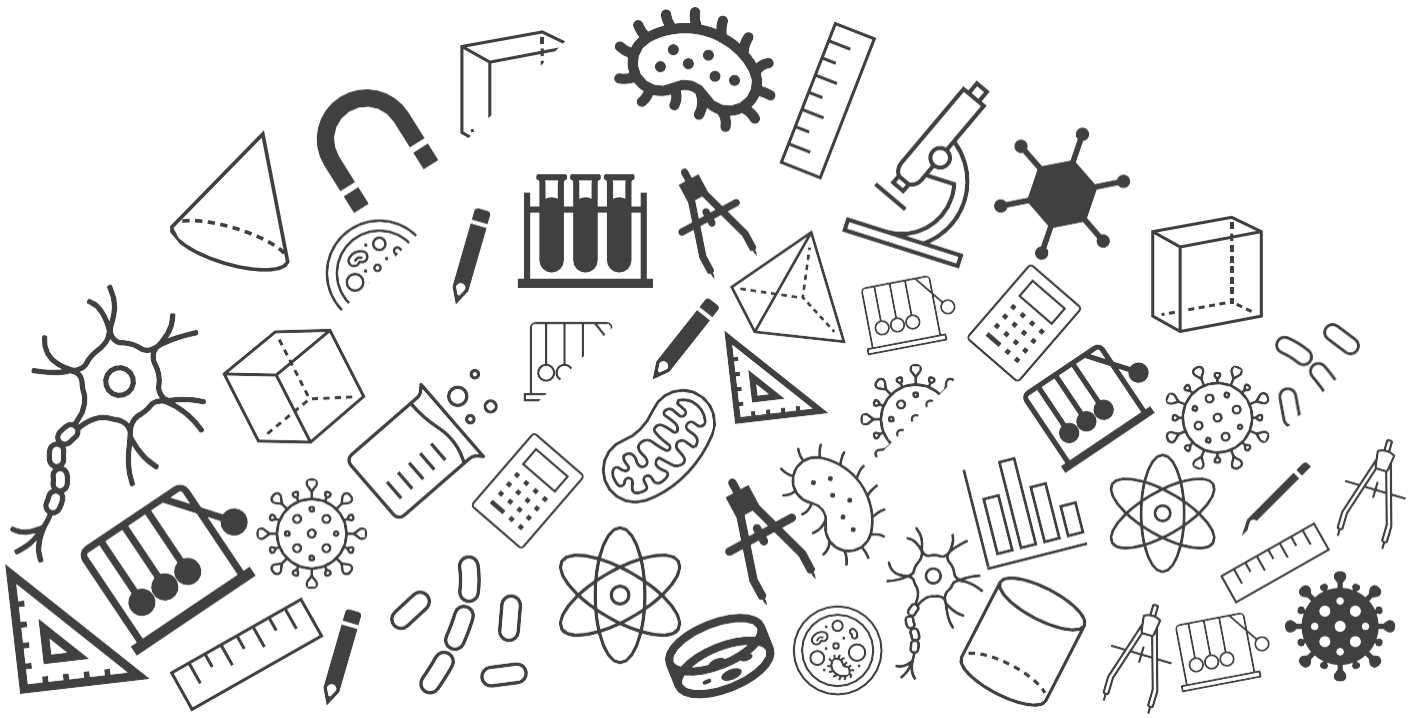
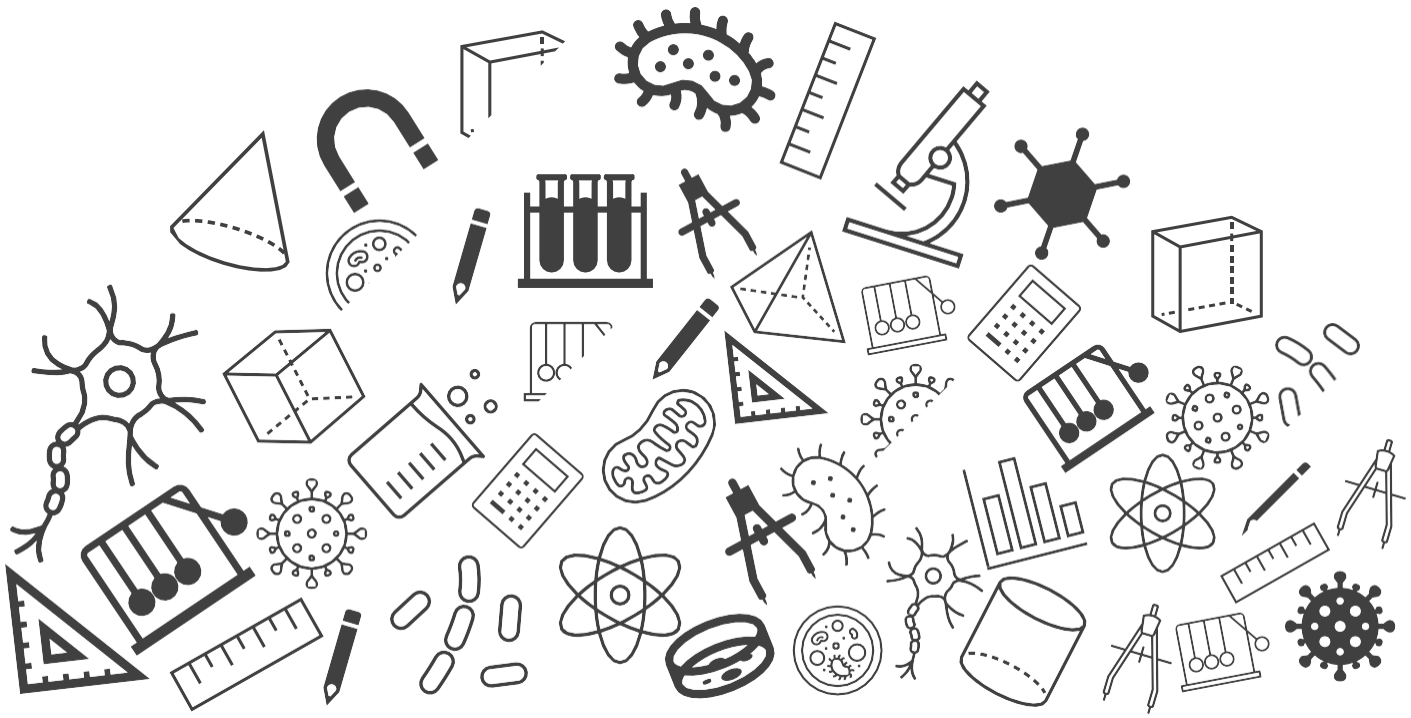
Grade 07: Maths
Exam Important Questions



Data Handling



Data Handling

Topic : Exam Important Questions

1. The runs scored in a cricket match by 11 players is as follows:
$6, 15, 120, 50, 100, 80, 10, 15, 8, 10, 15.$
Find the median of this data.
[2 marks]

Solution:
Arranging the data in order, we get,
$6, 8, 10, 10, 15, 15, 15, 50, 80, 100, 120$
[1 mark]

Since, there are 11 terms, median will be $\frac{11+1^{th}}{2}$ term

Therefore, median = 6^{th} term $= 15$
[1 mark]

2. The range of the data $14, 6, 12, 17, 21, 10, 4, 3$ is:
[2 marks]

A. 21

B. 17

C. 18

D. 11

Solution:
The correct option is C.

Arranging the given numbers in ascending order,
$3, 4, 6, 10, 12, 14, 17, 21$
[1 mark]

Range = Highest value – Lowest value
$\Rightarrow$ Range$= 21 - 3 = 18$
[1 mark]

3. Find the mode of the following data: 12, 14, 12, 16, 15, 13, 14, 18, 19, 12, 14, 15, 16, 15, 16, 16, 15, 17, 13, 16, 16, 15, 15, 13, 15, 17, 15, 14, 15, 13, 15, 14

[3 marks]

Solution:
Tabulating given data:

Observation	Tally Marks	Frequency
12	|||	3
13	||||	4
14	𝍸	5
15	𝍸 𝍸	10
16	𝍸 |	6
17	||	2
18	|	1
19	|	1

Since, the frequency of 15 is highest, mode of the given data will be 15.
[3 marks]

4. The rainfall (in mm) in a city on 7 days of a certain week was recorded as follows:

Day	Mon	Tue	Wed	$Thurs$	Fri	Sat	Sun
$Rainfall\ (in mm)$	0.0	12.2	2.1	0.0	20.5	5.5	1.0

Find the range of the rainfall in the above data.

[2 marks]

Step 1: Find the highest and lowest rainfall:
Highest rainfall $= 20.5\ mm$
Lowest rainfall $= 0.0\ mm.$
[1 mark]
Step 2: The range of the rainfall $=$ Highest rainfall – Lowest rainfall
$= 20.5 - 0.0 = 20.5\ mm.$
[1 mark]

5. A die was thrown 15 times and the outcomes recorded were
$5, 3, 4, 1, 2, 6, 4, 2, 2, 3, 1, 5, 6, 1, 2.$
Find the mean, median and mode of the data.
[3 marks]

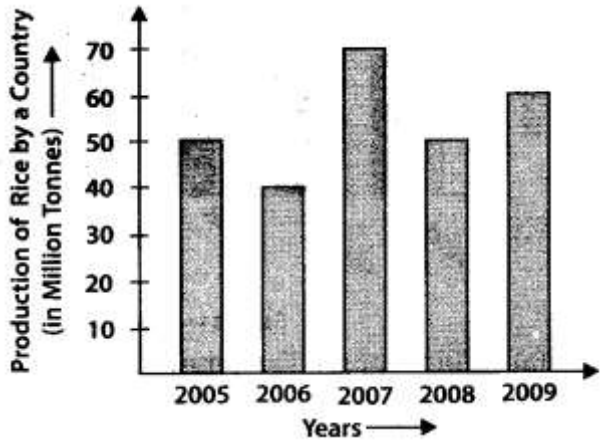
Arranging the data in ascending order, we have
$1, 1, 1, 2, 2, 2, 2, 3, 3, 4, 4, 5, 5, 6, 6.$

Mean $= \frac{1+1+1+2+2+2+2+3+3+4+4+5+5+6+6}{15} = \frac{47}{15} = 3.13$
[1 mark]

In the given data, 2 occurs the maximum of times.
So, mode of the given data is 2.
[1 mark]

Median = Value of $\left(\frac{n+1}{2}\right)^{\text{th}}$ observation = Value of $\left(\frac{15+1}{2}\right)^{\text{th}}$ observation
= Value of 8^{th} observation = 3
[1 mark]

6. Study the bar graph given below and answer the questions that follow.



(a) What information does the above bar graph represent?

(b) In which year was production the least?

(c) In which year was the production of rice maximum?

(d) Find the average production of rice during the 5 years.

(e) Find the difference of rice production between the years 2006 and 2008.

[5 marks]

(a) The bar graph represents the information about the production of rice in a country during the years 2005 to 2009.
(1 mark)

(b) In 2006, the production was least.
(1 mark)

(c) In 2007, there was a maximum rise in the production.
(1 mark)

(d) Average production

$= \frac{Sum\ of\ production\ in\ every\ year}{Number\ of\ years}$

$= \frac{50 + 40 + 70 + 50 + 60}{5}$ million tonnes

$= 54$ million tonnes
(1 mark)

(e) Rice production in 2006 = 40 million tonnes
Rice production in 2008 = 50 million tonnes
∴ Difference = (50 – 40) million tonnes
= 10 million tonnes
(1 mark)

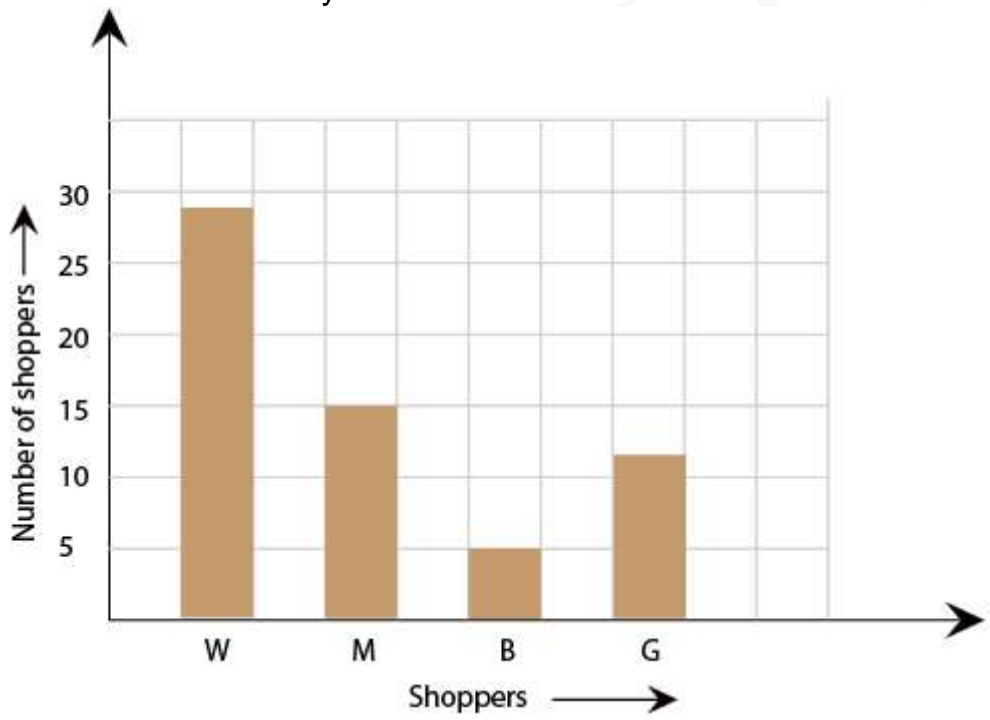
7. The shoppers who come to a departmental store are marked as: man (M) , woman (W) , boy (B) or girl (G). The following list gives the shoppers who came during the first hour in the morning.
W WW G B W W M G G M M W WWW G B M W B G G M W W M M W WW MW B W G M W WWW G W WM M W M W G W M G W M M B G G W.
Make a frequency distribution table using tally marks. Draw a bar graph to illustrate it.
[4 marks]

The frequency distribution table is as follows:

Shopper	Tally Marks	Number of shoppers
W	𝍸 𝍸 𝍸 𝍸 𝍸 III	28
M	𝍸 𝍸 𝍸	15
B	𝍸	5
G	𝍸 𝍸 II	12
	Total	60

(1 mark)

The illustration of data by bar is as follows:



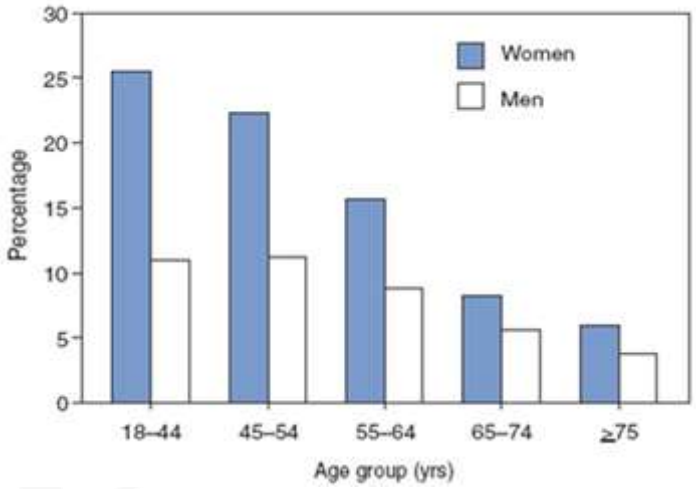
(0.5 mark for scaling)
(0.5 mark for X-Y axes)
(2 marks for histogram)

8. The graph depicts the percentage of men and women suffering from a migraine in various age groups.

a) In which age group, there is a huge difference between the percentage of men and women?

b) In which age group, the percentage of women is the least?

c) What is the percentage of women in the age group of 18-44?



[3 marks]

a) In the age group 18 - 44, there is maximum difference between the bars of men and women. So the difference (the percentage of women - the percentage of men) is 15%

b) In the age group $\geq$75, the percentage of women is the least of all.

c) The percentage of women in the age group 18 - 44 is 25.
[3 $\times$ 1 = 3 marks]